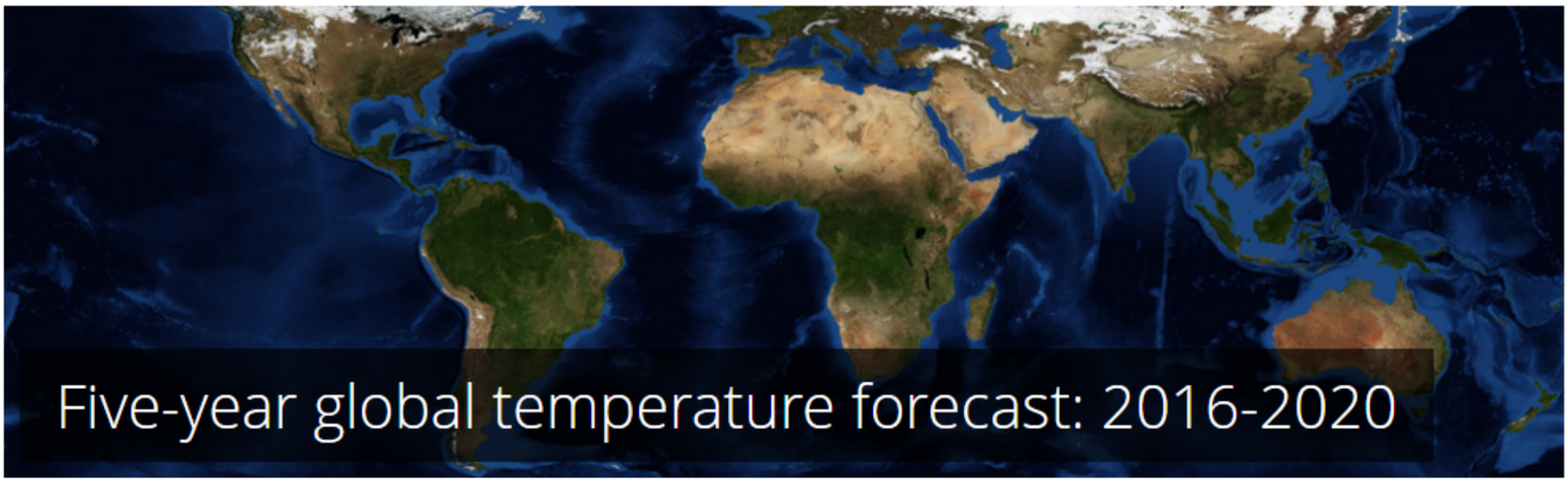

1 February 2016 - The latest Met Office decadal forecast predicts global temperatures for the five-year period from 2016 to 2020

The forecast will be between 0.28 °C and 0.77 °C above the long-term (1981-2010) average. For comparison, 2015 - currently the warmest year on record in the Met Office series dating back to 1850 - was 0.44 °C (±0.1 °C) above the 1981-2010 long-term average.

This forecast also suggests global temperatures over the next five years are likely to be well within, or even in the upper half, of the range of warming expected by the CMIP5 models, as used by the Intergovernmental Panel on Climate Change.

Decadal forecast 2016
Observed (black, from Hadley Centre, GISS and NCDC) and predicted (blue) global average annual surface temperature difference relative to 1981-2010

Doug Smith is a leading expert on decadal prediction at the Met Office Hadley Centre. He said: "We expect the global average temperatures for 2016 are likely to be at least as warm as 2015 - a record-breaking year. Considering the influence of the very strong El Niño, currently active in the Pacific, then 2016 could well be another record year.

"However, the run of consecutive record years for globally-averaged temperature may end in 2017, as the influence of the current El Niño ends, nevertheless high levels of greenhouse gases in the atmosphere will continue to influence the climate and drive very warm years."

Averaged over the five-year period 2016-2020, forecast patterns suggest enhanced warming over land, and at high northern latitudes. There is some indication of continued cool conditions in the Southern Ocean and of relatively cool conditions in the north Atlantic. The latter is potentially important for climate impacts over Europe, America and Africa.

This is the first decadal forecast using the Met Office's new prediction system featuring higher resolution representation of both ocean and atmosphere. This is now in line with the Met Office's seasonal forecasting system.

Last updated: 1 February 2016